ABSTRACT

A unit for on-demand chemical etch. Stencil media is unwound from a stencil unwind hub and passed underneath the thermal print head and printed. The stencil media is a sandwich that is comprised of a porous material married to a pressure-sensitive adhesive coated carrier to supply stiffness and support to the mesh. After the stencil is printed, the carrier is peeled away and is rewound onto a carrier rewind hub, leaving only the printed stencil. This printed stencil is transported underneath the etching electrode, at which time, the electrode actuates downward, sandwiching the printed stencil between the electrode and the target object so that the chemical etching process may be performed. The spent stencil rewinds onto a stencil rewind hub. The stencil printing and etch functions can be provided in a handheld unit. The handheld unit is comprised of an actuating etching head, a print head, a ribbon support system and media support system.